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March 1941

Air Conditioning.

Comfort and health and temperature a mathematical solution. By W. L. Fleisher and W. L. Fleisher, Jr. Heating, piping & air conditioning. v.13, no.3. March 1941. p.182-187.

Influence of physiological research on comfort requirements. By Robert W. Keeton, Ford K. Hick, Nathaniel Glickman and M. M. Montgomery. Heating, piping & air conditioning. v.13, no.3. March 1941. p.188-195.

Reactions of animals to environmental air conditions. By Samuel Brody. Heating & ventilating. v.37, no.12. December 1940. p.28-32. Concerned primarily with animals other than man and particularly with farm animals.

Simple chart for air conditioning problems. By R. E. Geauque. Heating & ventilating. v.37, no.12. December 1940. p.17-19. Author presents air vapor chart by means of which most air conditioning problems can quickly and easily be solved. Includes number of practical examples and follows through with their solution.

Summer cooling in the research residence with a gas-fired dehydration cooling unit. By A. P. Kratz, S. Konzo and E. L. Broderick. Heating, piping and air conditioning. v.12, no.12. December 1940. p.727-735. Investigation of operating characteristics of summer cooling unit was carried on in research residence during summer of 1940, and data were collected for continuous and intermittent operation of gas fired dehydration plant. Operating methods at various effective temperatures were studied and results indicate necessity for further study of methods of calculating moisture load. Effect of insulation in ceiling and side walls of building was also studied.

Air Raid Protection.

Air-raid shelter design. By Carroll Stoecker. Colorado engineer. v.37, no.3. March 1941. p.74-75, 94. Modern aerial warfare has caused design of air-raid shelters to become important problem in civilian defense. Ordinary construction and ventilation practice has necessarily been modified to become applicable to air-raid shelter design. Discusses problems and design trends in present-day shelter.

Air Raid Protection. (Cont'd.).

Cotton for bomb-proof shelters.
v.42, no.6.

March 15, 1941.

Cotton and cotton oil press.
p.41.

Precast concrete for bomb shelters in quick time.
Concrete. v.49, no.4.

April 1941.

By O. A. Aisher.
p.4-6.

Barns.

Barns are not just buildings.
January 11, 1941.

Prairie farmer.
p.136-137.

v.113, no.1.

Brooders, Electric.

Electric brooding helps do a better job.

By Willard C. Thompson.
April 5, 1941.

Rural New-Yorker.
p.226, 256.

v.100, no.5500.

Advantages. 1. Of utmost significance is automatic heat-supply control which is feature of all electric brooders. 2. Bother and nuisance of having to handle brooder fuel, such as wood, coal, or oil, as well as ashes, is eliminated. 3. Use of electricity practically eliminates fire hazard, for modern electric brooders are so constructed as to be almost fireproof. 4. Electric brooders, which have been properly stored away after use in previous brooding season, are ready for immediate use. 5. Electric brooders supply heat down on floor beneath hovers where chicks live, and tend not to throw heat up from canopies, which heat is wasted energy that heats room too much. 6. Cost of operating electric brooders compares favorably with other types, and in many places use of electricity is more economical. 7. It is readily possible to lower degree of heat furnished as chicks grow by simply pushing thermostat down to lower point on thermometer. 8. Entire floor area underneath hover of electric is available for chicks, as there is no stove to take up valuable floor space. Disadvantages. 1. It is utterly dependent upon continuous electric current. 2. Some have experienced tendency to dampness accumulating on floor area directly beneath hover, but almost invariably cause of such disagreeable dampness has been found to be due to failure of operator to set up electric brooder as per directions furnished by manufacturers.

Homemade electric brooder.
v.28, no.13.

By Armin J. Hill.
March 1, 1941.

Montana farmer.
p.11.

Building Construction.

Analysis of statically indeterminate trussed structures by successive approximations: Discussion. By Messrs. Charles A. Ellis, and David J. Peery. American society of civil engineers. Proceedings.
v.67, no.4, part 1. April 1941. p.677-686.

How to estimate masonry construction. Part 1.
v.98, no.4. April 1941.
cedure in figuring costs.

p.40, 42.

Brick & clay record.
General pro-

Building Construction. (Cont'd.).

- Laminated wooden rafters. Hoard's dairyman. v.86, no.5.
March 10, 1941. p.154.
- Plastic theory of reinforced concrete design: Discussion. By Messrs.
Paul Andersen and R. A. Caughey. American society of civil engineers.
Proceedings. v.67, no.4, part 1. April 1941. p.667-670.
- Suggested design methods for rapid concrete construction at low cost.
By S. B. Moore. Bulletin of society of American military engineers.
No. 6. April 1941. p.26-32.

Building Materials.

- Aircraft plywood and adhesives. By Thomas D. Perry. Journal of
aeronautical sciences. v.8, no.5. March 1941. p.204-216.
- Concrete in sea water: a revised viewpoint needed: Discussion. By
Messrs. W. F. Way and Glenn S. Paxson. American society of civil
engineers. Proceedings. v.67, no.4, part 1. April 1941.
p.687-690.
- Expansion of concrete through reaction between cement and aggregate: Discussion.
By Messrs. Hubert Woods and N. T. Stadtfeld. American society of
civil engineers. Proceedings. v.67, no.4, part 1. April
1941. p.671-676.
- More houses of earth. By A. B. Lee. Coronet. v.9,
no.5. March 1941. p.18-27.
- New use for mud. By J. C. Thompson. Purdue agriculturist.
v.35, no.6. March 1941. p.1, 15. Adobe, a material
made of clay which resembles clay bricks, may become an important building
material in Indiana.
- Proportioning of concrete materials. By J. C. Witt. Concrete.
v.49, no.5. May 1941. p.33-38, 39.
- Raw sawdust as aggregate has its limitations. By L. W. Neubauer.
Concrete. v.49, no.4. April 1941. p.35-36.
- Conclusions: 1. Cement-sawdust concrete is rather uncertain and unreliable
and its strength can not be easily predicted. 2. Its weakness is generally
due to soluble organic content which interferes with setting of cement, and
wood of high soluble organic content should be avoided. 3. Water-cement
ration is especially important and should be watched with extreme care.
4. This problem may be simplified by previous saturation of sawdust in water.
5. Mixing proportions are preferably about 1:3 or 1:3 1/2. Richer mixes are
strong, heavy, conductive and expensive. Leaner mixes are cheap, weak, non-
durable and inflammable. 6. Best utility is obtained where strength is not
vitally important, but where economy, light weight, insulating value, nail-
holding ability, and resistance to burning and termites are desired. 7. It
is always advisable to test small trial batch for one or two-day period be-
fore mixing any kind of saw-dust in quantity. 8. Some recommended species
of saw-dust are spruce, Norway pine, jack pine, and aspen. 9. Woods to be
avoided include cottonwood, oak, Douglas fir, birch, maple and red cedar.

Building Materials. (Cont'd.).

Recommended practice and standard specifications for concrete and reinforced concrete: Discussion. By Messrs. Harold E. Wessman, N. T. Stadtfeld, C. A. Ellis, R. H. Sherlock, S. C. Hollister, Thomas K. A. Hendrick, Morris Berman, F. R. McMillan, and Moyer Hirschthal. American society of civil engineers. Proceedings. v.67, no.4, part 1. April 1941. p.727-736.

Chemistry, Technical.

What chemurgy finds in corn. Prairie farmer. v.113, no.1. January 11, 1941. p.65.

Cotton Gins and Ginning.

Better ginning service with new gin installations. By Francis L. Gerdes and Charles A. Bennett. Cotton and cotton oil press. v.42, no.6. March 15, 1941. p.20-21, 44.

Cotton ginning research and extension activities in 1940. By Charles A. Bennett and Francis L. Gerdes. Cotton ginners' journal. v.12, no.7. April 1941. p.48-53, 56-57.

Cotton Machinery.

Methods of harvesting cotton as related to quality of ginning. By D. T. Killough. Cotton and cotton oil press. v.42, no.6. March 15, 1941. p.40-41.

Cottonseed.

Through the cotton boll: The story of cottonseed. Dallas, Texas, National cottonseed products association, inc., 1938. 28 p. Bulletin no.14.

Crops (Drying).

Investigations in the sulfuring of fruits for drying. By J. D. Long, E. M. Mrak, and C. D. Fisher. Berkeley, Cal., 1940. 56 p. California. Agricultural experiment station. Bulletin no.636.

Dams.

Cavitation in outlet conduits of high dams: Discussion. By Messrs. V. E. Leman, P. S. O'Shaughnessy and E. S. Randolph, and Carroll F. Merriam. American society of civil engineers. Proceedings. v.67, no.4, part 1. April 1941. p.654-664.

Earth dam on permeable foundation of finite depth with underlying non-horizontal watertight stratum. By F. B. Nelson-Skorniakov. Comptes rendus (Doklady) de l'académie des sciences de l'URSS. v.28, no.6. 1940. p.488-493.

Dams. (Cont'd.).

Supervision of dams and reservoirs in Connecticut. By Clarence M. Blair.
New England water works association. Journal. v.55, no.1.
March 1941. p.12-22.

Time required to saturate an earth dam. By K. P. Karpoff.
Civil engineering. v.11, no.4. April 1941. p.238-
240.

Drainage.

Controlled drainage. By David H. Harker. Agricultural
engineering. v.22, no.4. April 1941. p.139-142.

Drainage and evaporation from fallow soil at Rothamsted. By H. L.
Pennan and R. K. Schofield. Journal of agricultural science.
v.31, part 1. January 1941. p.74-109.

Land drainage: the present position. By J. N. Doniny. Country
life. v.89, no.2300. February 15, 1941.
Adv. sec. p.18.

Relation of drainage to rainfall and other meteorological factors.
By P. N. Sahni. Journal of agricultural science. v.31,
part 1. January 1941. p.110-115.

Electric Wiring.

How to buy electric wiring. By F. L. Aime. Southern power &
industry. v.59, no.5. May 1941. p.94-97.
Power losses, voltage drop and equipment failures combine to stifle opera-
tion where wiring is inadequate.

Electricity on the Farm.

Acceptance of electric service on the farm. By H. J. Gallagher.
Rural electrification exchange. v.4, no.2. Second quarter,
1941. p.25-29, 43-44.

Electric feed cookers for live stock. By D. G. Ebinger.
Rural electrification exchange. v.4, no.2. Second quarter,
1941. p.44.

Electrification in Pennsylvania. By R. U. Blasingame.
Pennsylvania farmer. v.124, no.6. March 22, 1941.
p.20-21.

Farm electrification statistics. Rural electrification exchange.
v.4, no.2. Second quarter, 1941. p.48-49.

Road ahead for the REA. By Harry Slattery. Land policy
review. v.4, no.3. March 1941. p.15-17.
Tells briefly of accomplishments of organization.

Electricity on the Farm. (Cont'd.).

Rural America lights up. By Harry Slattery. Washington, D. C.,
National home library foundation, 1940. 142 p.

Step-up in rural electrification technology needed. By S. P. Lyle.
Agricultural engineering. v.22, no.4. April 1941.
p.135-136. Rural electrification is now growing rapidly and is
receiving increasing social and economic impetus, but is in need of further
acceleration of rural electrification technology to keep pace with expan-
sion of service in farming areas presenting new problems in use of
electricity.

Erosion Control.

Field unit planning. By Harry H. Gardner. Soil conservation.
v.6, no.10. April 1941. p.255-256, 258.

Soil erosion by wind action. Engineering. v.150, no.3904.
November 8, 1940. p.364-365.

Farm Buildings.

Brick rural buildings at less cost than frame. Brick & clay record.
v.98, no.3. March 1941. p.56-57.

Foundations for farm buildings. By T. A. H. Miller and E. G. Molander.
Washington, D. C., 1941. 45 p. U. S. Department of agri-
culture. Farmers' bulletin no.1869.

Needed research on southern farm buildings. By W. V. Hukill.
Agricultural engineering. v.22, no.4. April 1941.
p.127-128.

Profit-making farm buildings. Prairie farmer. v.113, no.1.
January 11, 1941. p.134-135.

Farm Layouts.

Farmstead planning combines beauty and profit. By Dave Thompson.
Prairie farmer. v.113, no.1. January 11, 1941.
p.126, 128.

Farm Machinery and Equipment.

Agricultural machines and implements from a farmer's point of view.
By Major James Keith. Scottish journal of agriculture.
v.23, no.2. January 1941. p.121-133. Tractors.
Ploughs. Cultivators and harrows. Seed plowing. Manure distributors.
Harvesting and haymaking machinery. Potato diggers. Milking machines.
Storage of implements.

Better equipment in use. By E. L. Barger and J. W. Martin.
Missouri ruralist. v.82, no.4. February 15, 1941.
p.10-11, 23.

Farm Machinery and Equipment. (Cont'd.).

- Can a farmer be equipment poor? By G. W. McCuen. Ohio farmer.
v.187, no.5. March 8, 1941. p.5.
- Combine harvesters in Missouri. By Mack M. Jones and Robert P. Beasley.
Columbia, Mo., 1941. 27 p. Missouri. Agricultural experi-
ment station. Bulletin no.426.
- Farm machinery sales for 1940 up 18 per cent from 1939. Implement
record. v.38, no.4. April 1941. p.62.
- Farm machinery to fit your farm. Montana farmer. v.28, no.13.
March 1, 1941. p.3, 5, 10. For reducing the labor of
harvesting.
- High tide of the farm machine. By Philip S. Rose. Country
gentleman. v.111, no.3. March 1941. p.7-8, 58.
- Industry's volume showed 19 per cent gain in 1940. Implement & tractor.
v.56, no.8. April 12, 1941. p.14-15, 50, 52-53.
Table 2--Principal items of farm equipment and related products manufac-
tured and sold, by number and value: 1940.
- Looking into tillage methods. By Vincent F. Cahoy. Dakota
farmer. v.61, no.4. February 22, 1941. p.68, 77.
Discusses results of special tillage equipment and methods worked.
- Machinery increases income of farm workers says newspaper. Implement
record. v.38, no.4. April 1941. p.14.
Article appeared January 18 in Bakersfield "Californian" under heading
"Farm Technology."
- Mower for grass cover crop. California citrograph. v.26, no.1.
November 1940. p.20.
- New ditcher. By D. Aylen. Rhodesia agricultural journal.
v.38, no.1. January 1941. p.8-14.
- New farm machinery. Farm journal & farmer's wife. v.65, no.3.
March 1941. p.38, 87-88.
- New seed mixer and sampler. By C. W. Leggatt. Scientific
agriculture. v.21, no.5. January 1941. p.233-236.
- 1941 machines are better machines. Ohio farmer. v.187, no.5.
March 8, 1941. p.4, 35.
- Plenty of machines ready for early buyers. By H. G. Davis.
Kansas farmer. v.78, no.3. February 8, 1941. p.18-19.
- Potato vine lifters. By George M. Foulkrod and Paul T. Blood.
Durham, N. H., 1941. 4 p. New Hampshire. University.
Extension service. Circular no.235.

Farm Machinery and Equipment. (Cont'd.)

Production and sales of farm equipment in 1940. Farm implement news.
v.62, no.7. April 3, 1941. p.16-19. Table No. 1---
Value by classes of farm equipment made and sold in 1940, 1939 and 1938.
Table No. 2---Numbers and value of farm equipment manufactured and sold
in 1940.

Sowing and growing. Prairie farmer. v.113, no.1.
January 11, 1941. p.50-51.

Farmhouses.

Better farm housing---problem and opportunity. By Frank J. Hallauer.
Land policy review. v.4, no.4. April 1941. p.27-30.

Fences.

How to build colonial Williamsburg fences. Part 2. American builder.
v.63, no.4. April 1941. p.148-151.

How to buy industrial fencing. By R. D. Logee. Southern power
& industry. v.59, no.5. May 1941. p.102-104.
Fencing is most logical plant protection, and it can be both reasonable in
cost and attractive in appearance.

Williamsburg fences. American builder. v.63, no.3.
March 1941. p.122-124. Photographs and measured drawings
present these graceful home accessories.

Fertilizer Placement.

Fertilizer placement under irrigation in Washington. By C. Emil Nelson
and L. C. Wheeting. Journal. American society of agronomy.
v.33, no.2. February 1941. p.105-114. Study was
undertaken to determine best methods of application with row crops and to
indicate value of proper placement when irrigation water might move greater
portion of fertilizer.

Proceedings of the sixteenth annual meeting of the National joint committee
on fertilizer application, including reports of cooperators. Held at
Chicago, Illinois, December 2, 1940. Washington, D. C., National
fertilizer association, 1941. 156 p. processed.

Fire Protection.

Fighting the fire menace. Textile weekly. v.27, no.677.
February 21, 1941. p.249. New type incendiary bomb trap.

Fire extinguishers and fire hazards in the chemical industry. By Norman
Clarke Jones. Chemistry & industry. v.60, no.8.
February 22, 1941. p.113-119.

Fire Protection. (Cont'd.).

Make your home a fire-trap.
gardens. v.19, no.7.

By Eugene Raskin.
March 1941.

Better homes &
p.22-23.

Flax.

Flax-growing in Scotland.
agriculture. v.23, no.2.

By John Stirling.
January 1941.

Scottish journal of
p.139-145.

Floors.

Precast concrete troughs in new floor type.
May 1941. p.27.
flat tiles and cement-and-sand topping.

Concrete. v.49, no.5.

Structural members used in conjunction with

Flow of Water and Gases.

Flow in effluent troughs.

By Randolph H. Dewante and E. Ralph Stowell.

Civil engineering.

v.11, no.4.

April 1941.

p.212-213.

Application of experimental data to design of sedimentation basins.

Flow in piping.

By William Goodman.

Heating, piping, & air con-

ditioning.

v.13, no.3.

March 1941.

p.155-156.

Explains use of universal flow chart.

Flow of ground waters down to draining channels in the case of impervious
stratum. By F. B. Nelson-Skorniakov.

Comptes rendus (Doklady)

de l'académie des sciences de l'URSS.

v.28, no.6.

1940.

p.483-487.

Foods, Frozen.

Quality of frozen poultry as affected by storage and other conditions.

By Harold M. Harshaw and others.

Washington, D.C., 1941.

20 p.

U. S. Department of agriculture. Technical bulletin no.768.

Fuels.

Fuel rating - its relation to engine performance.

By A. M. Rothrock.

SAE journal.

v.48, no.2.

February 1941.

p.51-65.

Paper presents analysis of physical principles involved in knock and pre-ignition as approach to solution of problem of fuel rating. From this examination, author proceeds to analysis of manner in which different engine operating conditions affect these factors which cause knock and preignition. Finally, he investigates extent to which present methods of rating fuels are in accord with analysis made in order to recommend lines that future research should take so that knock and preignition can be understood better and so that fuels can be rated more adequately. Among conclusions reached are that knocking characteristics of fuel cannot be expressed adequately by single value--that knock depends upon interrelation of two factors, end-gas density and end-gas temperature; and that, for this reason, variation of actual service values from laboratory value is unavoidable if single knock rating is to be used. Paper emphasizes that preignition and knock must be considered separately and points out difficulties encountered in attempting to express both characteristics by single method of fuel rating.

Fuels. (Cont'd.).

- Report of the fuel research board. Engineering. v.150, no.3907.
November 29, 1940. p.435.
- Report of the fuel research board. Engineering. v.150, no.3908.
December 6, 1940. p.445.

Heating.

- Heating systems. Power. v.85, no.3. April 1941.
p.78-80.
- How buildings lose heat. Power. v.85, no.3. April 1941.
p.74-75.
- How to figure heat loads. Power. v.39, no.3. April
1941. p.76-77.
- Modern heating equipment. Power. v.85, no.3.
April 1941. p.80-85.
- Radiant heating adds to comfort of cavity wall residence. Brick &
clay record. v.98, no.3. March 1941. p.70, 72.

Hotbeds and Cold Frames.

- Heating hotbeds with incandescent lamps. By Robert L. Zahour.
Rural electrification exchange. v.4, no.2. Second quarter,
1941. p.30-31, 35.
- How to build and use an electrical hotbed. By Lee C. Prickett.
Rural electrification news. v.6, no.7. March 1941.
p.10-11, 29-30.

Houses.

- Panel build homes for Quantico marines. American builder.
v.63, no.4. April 1941. p.160-162.
- Prefabricated houses finally "arrive". American builder.
v.63, no.4. April 1941. p.119, 180-187. Defense
housing orders furnish needed volume.

Hydraulics.

- Hydraulics of sprinkling systems for irrigation: Discussion.
By Arthur F. Pillsbury. American society of civil engineers.
Proceedings. v.67, no.4, part 1. April 1941.
p.691-694.

Insulation.

How to buy thermal insulation. By R. C. Parlett. Southern
power & industry. v.59, no.5. May 1941. p.72-76.
Proper selection of insulation presents an engineering problem which should
be solved for each individual project.

Important properties of electrical insulating papers. By Dr. H. H. Race,
R. J. Hemphill and H. S. Endicott. General electric review.
v.43, no.12. December 1940. p.492-499. Types of
paper and applications - thickness - density - finish - strength -
porosity - chemical characteristics - conducting particles - power factor.

Irrigation.

Aids to judgment in irrigation. By F. E. Staebner. Agricultural
engineering. v.22, no.4. April 1941. p.129-131,
136.

Consumptive use of water for agriculture. By Robert L. Lowry, Jr. and
Arthur F. Johnson. American society of civil engineers.
Proceedings. v.67, no.4, part 1. p.595-616. Trans-
piration and evaporation, together accounting for practically all con-
sumptive use of water, have been shown by experimental investigations to
be influenced by climatic factors, of which temperature gives one of better
correlations. Consumptive use in number of adequately watered irrigated
valleys and humid watersheds, representing wide range in climate, latitude,
elevation, and type of crops, is shown in paper to bear straight-line
relation, within narrow limits, to accumulated daily maximum temperatures
above 32° F during growing season. Factors responsible for deviations from
average consumptive use are discussed. Relation of consumptive use to
growing-season temperatures offers to engineer ready means of estimating
probable consumptive use on projects under investigation as initial step in
determining irrigation requirement at farm or at point of diversion.
Short descriptions of each area studied, with summaries of annual data, are
given in Appendix.

Nebraska apple orchards respond to irrigation. By C. C. Wiggins and
Ivan D. Wood. Rural electrification exchange. v.4, no.2.
Second quarter, 1941. p.40-41, 46.

Milk Cooling.

Factors effecting the purchase and use of a milk cooler. By C. P.
Wagner. Rural electrification exchange. v.4, no.2.
Second quarter, 1941. p.47.

Miscellaneous.

Report of the Chief of engineers, U. S. Army., 1940. Part 2.
Washington, D. C., Government printing office, 1941. 1497 p.

Scope and use of experiment station record. Experiment station record.
v.84, no.4. April 1941. p.433-436.

Motor Fuels.

Better the fuel. Prairie farmer. v.113, no.1. January 11,
1941. p.46, 49.

Loss of power in petrol engines running on producer gas. By Harold
Heywood. Engineering. v.151, no.3915. January 24,
1941. p.61-63.

Mobile producer gas units and charcoal fuel: some problems of development in
Australia. By F. Gregson. Australian forestry.
v.5, no.2. December 1940. p.88-102. Summarizes
developments in use of producer gas in Australia for the first twelve
months of the war.

Rating automotive diesel fuels in full-scale engines. By C. G. A. Rosen.
SAE journal. v.48, no.2. February 1941. p.72-75.

Report of cooperative fuel research committee. Results reported include
influence of cetane, volatility, viscosity, and gravity of diesel fuels as
they affect cold starting, smoothness, low-temperature starting, smoke,
power output, fuel consumption, smell, and engine deposits. Four reference
fuels were used in these studies.

Substitute motor fuels. Hoard's dairyman. v.86, no.5.
March 10, 1941. p.163.

Tractor fuel. By J. B. Torrance. Northwest farm equipment
journal. v.55, no.3. March 1941. p.43-44.
Presents some information which may be of value in consideration of matter.

Motors, Electric.

How to buy controls for small motors. By F. H. Roby. Southern
power & industry. v.59, no.5. May 1941. p.77-79.
Consider the control as brain center of machine and deal with it according-
ly---knowledge and experience are required.

Orchard Heaters.

New type orchard heater. By A. S. Leonard and F. A. Brooks.
California citrograph. v.26, no.1. November 1940.
p.14-15, 20. Describe development of stack and its operation.

Operation of orchard heaters. By Robert A. Kepner. Berkeley,
Cal., 1940. 32 p. California. Agricultural experiment
station. Bulletin no.643.

Orchard heater improvements. California citrograph. v.26, no.4.
February 1941. p.100-102.

Orchard heating demonstrations. California citrograph. v.26, no.1.
November 1940. p.11, 25. Growers informed of latest develop-
ments in frost protection equipment.

Paints and Painting.

How to buy industrial paint. By N. M. Collart. Southern power
& industry. v.59, no.5. May 1941. p.80-83.
Paint's three main functions: protection, appearance, and light control
must be considered in making profitable applications.

Pest Control.

Are electric insect traps effective? By E. J. Gildehaus.
Rural electrification exchange. v.4, no.2. Second quarter,
1941. p.34-35.

Electric light traps tobacco moths. By Mona D. Simonson. Rural
electrification news. v.6, no.7. March 1941. p.14.

Rat control. By Maurice W. Provost. Durham, N. H., 1940.
11 p. New Hampshire. University. Extension service. Circular
no.227.

War on insect pests. By A. E. Cameron. Scottish journal of agri-
culture. v.23, no.2. January 1941. p.169-178.
I. Methods of indirect control. -- 1. Rotation. 2. Cultivation. 3. Man-
uring. 4. Farm hygiene. 5. Time of sowing. II. Direct control.
1. Sprays and dusts. 2. Poison and other baits. 3. Traps and trap-crops.
4. Glasshouse pests. 5. Repellents.

Flows and Flowing.

Flows that made the prairies. Prairie farmer. v.113, no.1.
January 11, 1941. p.44, 48-49.

Poultry Houses and Equipment.

Cooling poultry houses. By Dr. V. S. Asmundson. Rural electri-
fication exchange. v.4, no.2. Second quarter, 1941.
p.45.

Hatcheries. Prairie farmer. v.113, no.1. January 11,
1941. p.176-178.

Houses for laying hens. By A. M. Goodman. Ithaca, N. Y., 1940.
43 p. Cornell university. Extension service. Bulletin no.451.

Housing farm poultry. By J. B. Kelley and W. M. Insko, Jr.
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- In hydraulic engineering practice, relation between rainfall and runoff has
generally been represented as ratio or coefficient. It has been recognized
that form of this relationship should be "rainfall minus losses equals
runoff." Heretofore inadequacy of hydrologic data has discouraged attempts
to evaluate losses as they occur during storm period. In this paper
writers call attention to recent improvement in hydrologic data with res-
pect to precipitation and stream flow, and to information with respect to
infiltration that has developed from research program of U. S. Department
of Agriculture; and they outline method of applying this information to
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